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| 10/028,015 | 12/21/2001 | Joshua J. Malone | TI-29277 | 2355 |
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| TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265 | | | GEBREMARIAM, SAMUEL A | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| Office Action Summary | Application No. 10/028,015 | Applicant(s) MALONE ET AL. |
| | Examiner SAMUEL A. GEBREMARIAM | Art Unit 2811 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 01 April 2008.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-9 and 20-28 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-9 and 20-28 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-146/08)
 Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____
- 5) Notice of Informal Patent Application
- 6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not clear what the structural relationship is between "said intermediate metallization layer" and "said intermediate metallization" as recited in claim 6.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3-9, 20-24 and 26-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Guzuk et al. US patent No. 5,153,379.

Regarding claim 1, Guzuk teaches (fig. 1) a substrate for a device package comprising: a first portion (124) of a package having a first surface (upper surface of 124) the first surface having a plurality of corner regions (the four corners of 124); an intermediate metallization layer ((114) is ground pad pattern) on the first surface of the

first portion (upper surface of 124), the intermediate metallization layer extending into a first corner region (any one of the corners of 124); a second portion (104) of the package on the first surface of the first portion (124), the intermediate metallization (portion 114 that is covering 124) in the first corner region extending beyond the second portion (104) to uniquely identify the first corner region.

Regarding claim 3, Guzuk teaches the entire claimed structure of claim 1 above including the first portion comprising a layered ceramic (col. 2, lines 39-49) portion containing electrical interconnections (130 and 132).

Regarding claim 4, Guzuk teaches the entire claimed structure of claim 1 above including a plating (114) on the extending of the first portion.

Regarding claim 5, Guzuk teaches the entire claimed structure of claim 1 above including an electrical device (112) electrically connected to portions of the intermediate metallization layer (114).

Regarding claim 6, as best the examiner is able to ascertain the claimed invention, Guzuk teaches the entire claimed structure of claim 1 above including an electrical device (112) electrically connected (112 is connected to 114 via 122) to portions of the metallization layer (114), said intermediate metallization in said first corner region (114, the region on one the corners) electrically isolated from the portions of the metallization layer electrically connected to the device (114 is not directly contacting 130 and 132).

Regarding claim 7, Guzuk teaches the entire claimed structure of claim 1 above including an electrical device (112) and a lid (102) enclosing the device between the lid and the substrate (128).

Regarding claims 8 and 9, Guzuk teaches the entire claimed structure of claim 1 above including the second portion (104) having a void over the first corner region allowing visibility to the metallization layer (114, col. 3, lines 38-41).

The limitation of the void is used to mechanically position the substrate is not given patentable weight because, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Furthermore the void structure of Guzuk is also capable of being used to mechanically position the substrate.

Regarding claim 20, Guzuk teaches (fig. 1) a substrate (128) for a device package comprising: a first portion (124) of a package having a first surface (upper surface of 124), the first surface having a plurality of corner regions (the four corners of 124); an intermediate metallization layer (114) on the first surface of the first portion (124) extending into a first corner region (any one of the corners); a second portion (104) of the package supported by the first surface of the first portion (124), the second

portion not covering the first corner region such that the first corner region is uniquely identified.

Regarding claim 21, Guzuk teaches the entire claimed structure of claim 20 above including the first portion comprising a ceramic (col. 2, lines 39-49) portion containing electrical interconnections (130 and 132).

Regarding claim 22, Guzuk teaches the entire claimed structure of claim 20 above including the first portion (124) comprising electrical connections on a second surface (134, bottom surface of 124) opposite said first surface (col. 3, lines 61-65).

Regarding claim 23, Guzuk teaches the entire claimed structure of claim 20 above including an electrical device (112) electrically connected to circuit portions of the intermediate metallization layer (114, fig. 1), the corresponding portion of the intermediate metallization layer electrically isolated from the circuit portions of the intermediate metallization layer (114 is not directly contacting 130 and 132).

Regarding claim 24, Guzuk teaches the entire claimed structure of claim 20 above including the second portion (104) having a void over the corresponding portion of the metallization layer (114, fig. 1).

Regarding claim 26, Guzuk teaches the entire claimed structure of claim 20 above including the first portion comprising a ceramic portion (col. 2, lines 39-49).

Regarding claim 27, Guzuk teaches the entire claimed structure of claim 20 above including the first portion comprising a polyamide/epoxy portion (col. 2, lines 39-49).

Regarding claim 28, Guzuk teaches the entire claimed structure of claim 20 above including the first portion comprising a plastic/epoxy portion (col. 2, lines 39-49).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-2, 20 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Ueda et al. US patent No. 6,037,698.

Regarding claim 1, Ueda teaches (fig.15) a substrate for a device package comprising: a first portion (5) of a package having a first surface (upper surface of 5) the first surface having a plurality of corner regions (the four corners of 5); an intermediate metallization layer (portion 16 that is covering 5) on the first surface of the first portion (upper surface of 5), the intermediate metallization layer extending into a first corner region (53); a second portion (6) of the package on the first surface (upper surface of 5) of the first portion (5), the intermediate metallization (16) in the first corner region (22a) extending beyond the second portion (6) to uniquely identify the first corner region.

Regarding claim 2, Ueda teaches the entire claimed structure of claim 1 above including the first (5) and second (6) portions comprising a ceramic (col. 7, lines 17-19).

Regarding claim 20, Ueda teaches (fig. 15) a substrate for a device package comprising: a first portion (5) of a package having a first surface (upper surface of 5), the first surface having a plurality of corner regions (the four corners of 5); an intermediate metallization layer (16) on the first surface (upper surface of 5) of the first portion (5) extending into a first corner region (22a); a second portion (6) of the package supported by the first surface of the first portion (5), the second portion not covering the first corner region such that the first corner region is uniquely identified (fig. 15).

Regarding claim 25, Ueda teaches the entire claimed structure of claim 1 above including the first surface of the first portion (5) having four said corner regions (222a-22d) corners, wherein only one (22a) of the corner regions corners extends beyond the second portion (6, fig. 15).

Response to Arguments

7. Applicant's arguments filed 4/1/08 have been fully considered but they are not persuasive. Applicant argues that the examiner failed to point out any teaching in Guzuk that would show, teach, or suggest to one of ordinary skill in the art at the time the invention was made "intermediate layer in said first corner region extending beyond said second portion to uniquely identify said first corner region. However as stated in the last office action, the claim only states that "the intermediate metallization layer extending into a first corner region; a second portion of the package on the first surface of the first portion, the intermediate metallization in the first corner region extending beyond the second portion to uniquely identify the first corner region.

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Therefore the claim does not require that said corner be any different than the rest of the remaining three corners. Clearly shown in the figure of Guzuk, the intermediate metallization layer (114) extending into a first corner region; a second portion (104) of the package on the first surface of the first portion (124), the intermediate metallization (portion 114 that is covering 124) in the first corner region extending beyond the second portion (104) to uniquely identify the first corner region. If applicant is saying that the intermediate metallization in the first corner region extending beyond the second portion to uniquely identify the first corner region from the rest of the corners, this limitation needs to be explicitly stated. Therefore as stated above in the rejection of claims 1 and 20, Guzuk teaches the claimed features.

Conclusion

8. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAMUEL A. GEBREMARIAM whose telephone number is (571)272-1653. The examiner can normally be reached on 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Gurley can be reached on (571) 272-1670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Lynne A. Gurley/
Supervisory Patent Examiner, Art Unit 2811

/SAG/
July 6, 2008